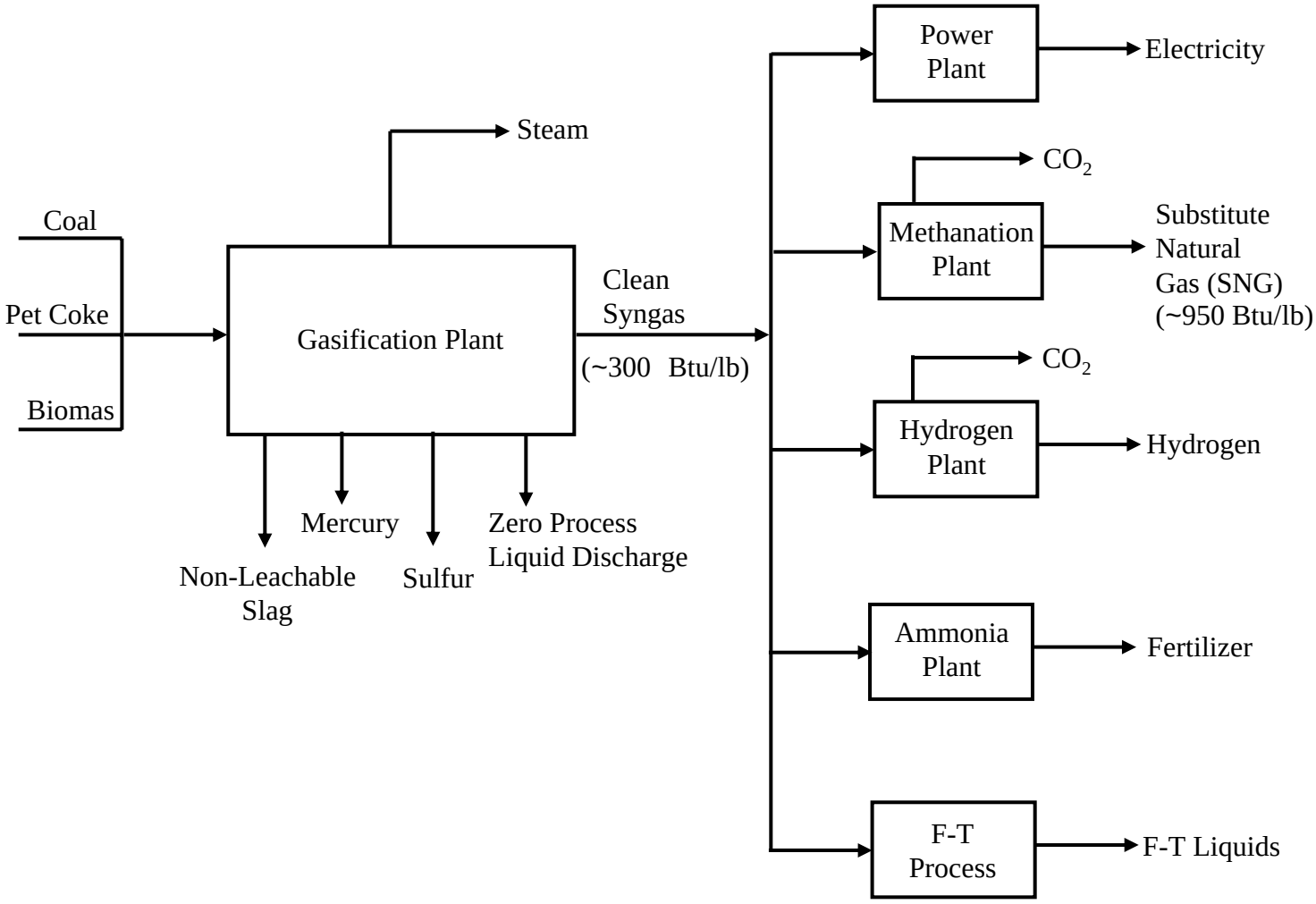
Presentation to the
Clean Coal Study Group
Public Service Commission of Wisconsin

A Competitive Process for Implementing IGCC in Wisconsin

MADISON POWER

Gasification Options



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Opportunities for IGCC Plants

1. Install new greenfield IGCC plants to meet growing base load power demand.

2. Refuel existing natural gas-fired combined cycle power plants.

3. Repower existing “dirty” coal plants.

4. Sell CO_2 for enhanced oil or methane recovery.

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Barriers to Development of Gasification Projects

1. High cost of front-end engineering design (FEED) package needed by turnkey EPC contractor to provide the guarantees required for financing.

2. High worldwide cost escalation since early 2004 has made it difficult to compare and evaluate new projects.

3. State regulators' inability/unwillingness to credit lower emissions by gasification facilities (NO_x, CO, SO_x, Mercury, and CO_2/future CO_2)

4. Inability for a refueled or repowered IGCC plant to convert from intermediate duty to base load duty.

5. State regulators' inability/unwillingness to allow IGCC and SCPC projects to compete directly for the same base load supply.

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Questions Posed by the Clean Coal Study Group

- Is IGCC ready from commercial application?
- "IGCC" or "SCPC"?
  - Capital Cost
  - O&M Cost
  - Fuel Cost
  - Availability
  - Emissions (air, liquid waste, solid waste)
  - Water Requirements
- Siting an IGCC Project in Wisconsin?
- Economic benefits of an IGCC project in Wisconsin?
- Policy changes needed?
- Risk sharing required?

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A Simple Competitive Process for Implementing IGCC in Wisconsin

- Issue a RFP for 600 to 800 MW of Base Load Capacity in Wisconsin.
- Select the best site (preferably at an existing "dirty" coal plant to be repowered).
- Assign value to reducing guaranteed emissions.
- Conduct three stage evaluation/selection process
  - Stage 1: Select the best IGCC Proposal and the best PC Proposal.
  - Stage 2: Fund FEED work needed by both projects to obtain guarantees required for financing and executing a Power Sales Agreement
  - Stage 3: Select the Preferred Project based on Guaranteed $/MWH

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